

COALITION FOR SUSTAINABLE CEMENT MANUFACTURING & ENVIRONMENT
1029 J Street, Suite 300, Sacramento, CA 95814

June 7, 2010

Ms. Mary Nichols
Chair
California Air Resources Board
1001 "I" Street
Post Office Box 2815
Sacramento, California 95812

Subject: Comments on CARB's May 17 Public Meeting on Allowance Allocation

Dear Ms. Nichols,

The Coalition for Sustainable Cement Manufacturing and Environment ("CSCME"), a coalition of all six cement manufacturers operating the 10 cement plants in California,¹ hereby submits the following comments on the presentation by the California Air Resources Board ("CARB") at its May 17, 2010 public meeting to discuss allowance allocation and next steps for the cap-and-trade program.

In short,

- The characteristics of the cement industry, the weight of existing research, and the findings of international trade cases all suggest that the cement industry is highly exposed to the risk of leakage in comparison to other emissions-intensive and trade-exposed ("EITE") industries.
- CARB should reevaluate and revise several aspects of its industry identification methodology, especially the use of producer price indices as an indicator of trade exposure.
- CARB should be commended for its proposed "tiered approach" and its recognition that the minimization of emissions leakage is a top priority in the use of allowance value.
- Benchmarks for EITE industries should include both direct and indirect emissions, and any allowance value intended to offset the impact of GHG-related electricity cost increases should be allocated directly to EITE industries rather than to the electric power sector.
- The most appropriate benchmark for the California cement industry is "cement" — defined as all ASTM cement that does not contain any supplementary cementitious materials ("SCMs") and the cement portion of any such cement containing SCMs.
- CARB should either eliminate or revise the concept of a uniform "cap adjustment factor" in the proposed allocation formula, as it is a direct contradiction to the "tiered approach" and the principle that the minimization of leakage is a priority that justifies and necessitates differentiated levels of policy assistance.

¹ The Coalition includes CalPortland Company, Cemex, Inc., Lehigh Southwest Cement Company, Mitsubishi Cement Corporation, National Cement Company of California Inc., and Texas Industries, Inc.

- Even under a benchmarking approach that fully offsets compliance costs up to an industry average, the risk of leakage will still exist for certain entities within the industry. Consequently, a partial border adjustment is required to level the competitive playing field between imported and domestic cement. To the extent that allowance distributions are insufficient to offset 100 percent of the industry's compliance costs or are prematurely phased out, the importance of a partial border adjustment in reducing the risk of leakage will increase substantially.
- The cement industry is uniquely suited to the adoption of a partial border adjustment, which can be designed to be both World Trade Organization ("WTO") consistent and constitutional.

CSCME will submit additional comments upon CARB's release of additional details of its regulatory approach, including the specific methodologies underlying a number of critical points in CARB's presentation.

I. The Risk of Leakage in the California Cement Industry

1.1 The California cement industry is at a severe risk of economic and emissions leakage

As explained in detail in our prior comments,² the California cement industry is uniquely vulnerable to emissions leakage resulting from increased compliance costs associated with the implementation of AB 32. The specific characteristics of the cement industry in California, namely its high emissions intensity and its high exposure to competition from imports, creates a situation where the industry is exposed to high compliance costs that cannot be passed through to customers without a substantial loss of market share to imports and eventual disinvestment. A shift in demand from California cement to imported cement will not only lead to emissions leakage (due to the fact that most imported cement has a higher carbon footprint than California cement, especially when transportation emissions are considered), but also will lead to the loss of jobs and eventual deterioration of local communities in California that are directly and indirectly supported by cement manufacturing.

The California cement industry is particularly susceptible to emissions leakage for the following reasons:

- **Cement is a homogenous commodity:** Cement, which is sold in bulk, is identical in its use, regardless of the manufacturer, and it cannot be differentiated through labeling or advertising. The identity of the manufacturer therefore makes little difference to the consumer, and these goods compete almost exclusively on the basis of price.
- **Cement manufacturing is a highly GHG-intensive process:** In addition to having an energy-intensive production process, cement also has "process emissions," which are an unalterable consequence of the production process required to convert limestone into cement clinker. With process emissions that are over 50 percent higher than its combustion emissions, the cement industry has among the

² See CSCME October 23, 2007 paper "Minimizing 'Leakage' Under Climate Change Proposals Affecting The California Cement Industry" and June 9, 2008 paper "Building a Sustainable Future: Economic Growth, Climate Change, & The California Cement Industry".

highest emission intensities among energy-intensive manufacturing industries. As a result, the California cement industry is likely to face extremely high compliance cost per dollar of output, which it will be unable to pass through due to the presence of international competition.

- **California is an internationally-competitive market:** Generally speaking, cement markets have limited geographic scope because of the high cost of overland transportation. California, however, faces significant international competition due to its coastal location with multiple deep water ports in all of its major metropolitan markets. Maritime transportation of cement is significantly less expensive than overland transportation. Therefore, cement produced in Asia can reach the California market at a relatively low cost.
- **Cement is a capital-intensive industry:** Cement manufacturing requires large upfront investments in capital equipment that is employed for decades. As a result, the profitability of cement manufacturers is highly sensitive to sales volume – even small reductions in volume can substantially reduce profits and returns on investment. In addition, small increases in regulatory compliance costs can result in large impacts on overall competitive conditions and investment decisions.
- **Cement is a technologically mature industry:** No major technological shifts in large-scale pyro-processing production technology are expected in the foreseeable future in the cement industry, and the potential for significant reductions beyond those derived from persistent marginal improvements in indirect (*i.e.*, electrical) energy efficiency is limited. In addition, California's history of environmental leadership has resulted in an industrial base that is more efficient and cleaner than those within other U.S. states or the vast majority of nations. Also, high energy prices and strong import competition has forced domestic manufacturers to remain on the leading edge of technology to improve energy efficiency, contain production costs, and thereby remain price competitive in the California cement market. Consequently, with very limited low-cost GHG abatement opportunities within the industry's control, the industry does not have the opportunity to mitigate its GHG compliance cost — thereby increasing its exposure to leakage.

1.2 Research has repeatedly confirmed that the cement industry is at a high risk of leakage

A survey of the literature on cement manufacturing, leakage, and carbon pricing mechanisms confirms the cement industry's susceptibility to emissions leakage. In his analyses of the industry under the EU Emissions Trading System ("ETS"), Ponssard (2009) points out that the costs associated with adding capacity in a capital-intensive industry, augmented by the imposition of a carbon price, are likely to disincentivize domestic capacity expansion to meet demand growth.³ Instead, it is likely that importing cement to meet demand will be more cost-effective than investing in new capacity. According to Demailly & Quirion (2005), Grubb et al. (2009), Ponssard, and Hourcade et al. (2007), incentives to increase imports to meet demand are amplified in coastal markets, such as California. These studies

³ Meunier, Guy and Jean Pierre Ponssard (December 2008). "Capacity Decisions with Demand Fluctuations and Carbon Leakage." Ecole Polytechnique.

find that the relative affordability of transporting cement overseas shields inland markets from import competition, but that import and leakage exposure increase significantly for plants located near coastlines.⁴

Furthermore, as noted above, there is a consensus that cement production stands out as a technologically mature process in the manufacturing industry. Cook (2009) and Demailly & Quirion note that there has been a convergence toward the most mature technology available, most notably in U.S. cement markets.⁵ They suggest that in the absence of "breakthrough technologies", such as CCS, the cement industry has very few places to look for efficiency savings, particularly given that approximately 40 percent of cement's direct emissions come from fuel combustion, while the remaining 60 percent is from the calcination of limestone. Simply put, the cement industry's technological maturity and limited scope for emissions reductions is likely to exacerbate the impact of carbon prices on the domestic producer's ability to compete with unregulated imports.

1.3 A history of antidumping cases confirms that the industry is highly trade-exposed

A series of trade cases provide direct evidence that the California cement industry is highly vulnerable to imports and thus is highly "trade-exposed". For almost 20 years, imports of cement from Mexico, Japan, and Venezuela were subject to additional "antidumping" duties to remedy unfair trade practices in relation to injurious, low-priced imports. In numerous investigations, the U.S. International Trade Commission ("ITC") found that the dumping of low-priced imports was causing material injury to the U.S. domestic cement industry and, in particular, to the California cement industry. These findings confirm that the California cement industry is highly vulnerable to imports and thus is highly "trade-exposed."

The analysis of material injury in an antidumping proceeding has significant parallels to the analysis necessary to evaluate the impact of increased compliance costs associated with AB 32. In its injury analysis, the ITC examines the impact of dumped imports on the domestic industry, including whether such imports are causing adverse price effects through underselling and price depression/suppression. In the antidumping context, imports are being sold at unfairly low or "dumped" prices and are causing adverse effects in the domestic market. In the context of AB 32, the increased compliance costs faced by California producers would have the same effect -- imports would be able to sell into California at lower prices in the absence of a similar cost burden.

⁴ Demailly, Damien and Philippe Quirion (November 2005). "The Competitiveness Impact of CO2 Emissions Reduction in the Cement Sector." Organization for Economic Cooperation and Development; Grubb, Michael et al. (August 2009). "Climate Policy and Industrial Competitiveness: Ten Insights from Europe on the EU Emissions Trading System." The German Marshall Fund; Meunier & Ponssard (2008); Hourcade, Jean-Charles et al. (December 2007). "Differentiation and Dynamics of EU ETS Industrial Competitiveness Impacts." Climate Strategies.

⁵ Cook, Gregory (September 2009). "Climate Change and the Cement Industry: Assessing Emissions and Policy Response to Carbon Prices." Climate Strategies; Demailly, Damien and Philippe Quirion (February 2006). "Leakage from Climate Policies and Border Tax Adjustment: Lessons from a Geographic Model of the Cement Industry."

In its antidumping analysis, the ITC conducted its injury analysis on the basis of "regional" industries within the United States. In the most recent review in May 2006, the ITC found that the State of California constituted a "regional market" for cement because (1) the domestic producers within the regional market sell "all or almost all" of their production of the product within the region; and (2) the demand within the region is not supplied, "to any substantial degree," by domestic producers located elsewhere in the United States.⁶

In the original investigation involving imports of cement from Japan, the ITC findings highlight the extent of the industry's trade exposure and the adverse impact of low-priced imports:

The adverse effects of import volumes and prices on the domestic producers' financial condition is reflected in their inability to invest. The record of this investigation reflects that domestic producers have curtailed planned investments, and that the risk of investment in the Southern California cement industry has increased. Domestic producers, faced with price competition from [dumped] imports, have reduced prices in an effort to maintain production volumes and capacity utilization levels, so as to minimize the effect on profits. While this effort keeps production and shipments at higher levels, it adversely affects the producers' financial indicators. On the other hand, maintaining prices in the face of [dumped] import price competition would result in even greater declines in market share, and a resulting drop in contribution profits.⁷

Accordingly, consistent with the above comments, CARB should consider the extensive and objective findings and evidence already available from multiple U.S. antidumping investigations and reviews highlighting the significant vulnerability of the California cement industry to imports.

II. Allowance Allocation

CARB's proposed approach to allowance allocation consists of a three-step process: (1) identify industries at risk of leakage, (2) allocate a portion of cap allowances to provide transition and potentially leakage-prevention assistance to certain industries, and (3) distribute those allocated allowances using an updating output-based benchmarking approach. The following sections comment on each individual element.

2.1 Industry Identification

2.1.1 GHG Intensity

- *CARB should estimate GHG intensity using data that are consistent across timeframes*

⁶ *Gray Portland Cement and Cement Clinker from Japan*, ITC Publication 3856 (May 2006), at 10.

⁷ *Gray Portland Cement and Cement Clinker from Japan*, ITC Publication 2376 (April 1991), at 44.

In estimating GHG intensity, CARB is utilizing industry GHG emissions data from the 2008 mandatory reporting inventory and industry value-added data from the 2007 Economic Census. The approach of using data from a recession year in the numerator and data from a non-recession year in the denominator is highly unusual, and it is likely to significantly underestimate GHG intensities in certain sectors — namely, those that were disproportionally impacted by the economic downturn (*e.g.*, the construction, concrete, and cement industries).

Given that 2008 industry value-added data is not available at the state level, an alternative approach would be to scale the 2007 data based on trends in the national industry. Such an adjustment should eliminate any industry bias due to the impact of the recession. For example,

- According to the 2007 Economic Census, the California cement industry's value added was approximately \$835 million or, alternatively, 12 percent of total U.S. cement industry value added.
- According to the 2008 Annual Survey of Manufacturers, total U.S. cement industry value added was \$5.5 billion.
- Applying the 2007 state-to-national industry ratio (12 percent) to the 2008 U.S. industry value added data (\$5.5 billion), it is estimated that the California cement industry's value added in 2008 was actually \$680 million, which contrasts sharply with the \$835 million figure we assume is being used in CARB's calculations.

As a result, CSCME believes that CARB's approach of using emissions data from 2008 and value-added data from 2007 is likely to result in an underestimation of the California cement industry's GHG intensity by about 23 percent. We recommend that CARB adjust its methodology to account for this systematic bias.

2.1.2 Trade Exposure

- *The use of an industry's producer price index as an indicator of trade exposure is inappropriate*

CSCME believes that historical trade intensity is the single best quantitative indicator of trade exposure and supports the use of trade intensity metrics to identify industries at risk of leakage.⁸ However, the use of producer price indices ("PPI") as an indicator of trade exposure is inappropriate.

In its May 17th presentation, CARB staff indicated that PPI is used to supplement the analysis because the recent economic recession may result in trade intensities that "differ before/after 2007/2008 for many sectors".⁹

⁸ However, we have several concerns regarding CARB's application of the trade intensity concept and its calculation of industry trade intensity metrics. We intend to address these concerns upon release of CARB's white paper detailing its methodology.

⁹ California Air Resources Board (May 1020). "Greenhouse Gas Cap-and-Trade Regulation Status Update." p 53.

- One possible interpretation of this statement is that CARB is concerned that the recession may have momentarily distorted the "normal" conditions of competition within some industries and thereby biased industry trade intensity metrics. If so, there is a simple solution: exclude recession years (i.e., 2008-2009) from its analysis.
- An alternative interpretation of this statement is that CARB is concerned that the recession may have permanently altered trade patterns in some industries. Although the recent recession has undoubtedly altered trade patterns in many industries, as one might expect given its severity, it is unclear how historical U.S. industry PPI data would compensate for this.

More generally, it is unclear why historical U.S. industry output prices, as measured by PPI, would provide useful, accurate, or additional information about trade exposure beyond that provided by historical trade intensities. CSCME economists are unaware of any generally accepted theory for why producer price indices should have value as an indicator of trade exposure. They are also unaware of any other climate policy frameworks or climate policy experts that have recommended PPI as a relevant measure of trade exposure. In the absence of a coherent, tested, and generally accepted theory of why PPI is a valid indicator of trade exposure, CSCME strongly urges CARB to exclude it from its analysis.

2.2 Allowance allocation

- *CSCME supports CARB's tiered approach to allocating allowances across uses*

CSCME believes that leakage is a fundamental policy failure of any climate policy and the minimization of leakage is a top priority in the design and implementation of climate regulations. Consequently, we commend CARB's proposed "tiered approach" to allocating allowances and its recognition that leakage minimization is a top-tier use of allowance value. In contrast to the Waxman-Markey approach to EITE industries, CARB's approach of prioritizing access to allowance value is likely to significantly reduce the risk that allowance distributions to leakage-prone industries will be unexpectedly and abruptly pro-rated due to an insufficient allocation. This is likely to increase the long-term predictability of leakage assistance and decrease the leakage impacts associated with policy uncertainty.

2.3 Allowance distribution

- *Industry benchmarks should include both direct and indirect emissions*

Cement companies will be faced with increased electricity costs due to the application of a California cap-and-trade program, as well as the application of complementary GHG reduction measures (e.g., renewable portfolio standards), to the electric utility industry. To minimize the risk of leakage, EITE industries should receive allowance value that offsets indirect emissions cost burdens.

There are two basic approaches for offsetting the higher electricity costs that manufacturers experience as a result of climate policies.

- (1) Distribute allowance value to the electric power industry with the requirement that they use that value to offset higher GHG-related electricity costs to leakage-exposed manufacturers, which effectively mutes the carbon price signal.
- (2) Distribute allowance value directly to the leakage-exposed manufacturing sectors, allowing them to use that value to offset the carbon price signal transmitted from the electric power sector.

CSCME strongly recommends that benchmarks include both direct and indirect emissions and that the allowance value associated with indirect emissions be directly allocated to affected manufacturing entities rather than the electric power sector. This approach has two distinct advantages. First, it is more targeted and transparent, as the allowance value is allocated directly to affected entities. Second, it is likely to be more effective, as it allows the carbon price signal to be transmitted from the electric power sector to the manufacturing sector.

- *The cement industry benchmark should include clinker and mineral additives (e.g., limestone and gypsum), but exclude supplementary cementitious materials.*

Benchmarks must be tailored to the unique characteristics of the industry to which it is being applied. In the case of the cement industry, a key decision is the definition of "output" that forms the denominator of the benchmark. Several options exist, including: (1) cement clinker ("clinker"), (2) cement clinker plus mineral additives ("cement"), and (3) cement clinker plus mineral additives and supplementary cementitious materials ("cementitious"). The California cement industry believes that "cement" — defined as all ASTM cement that does not contain any SCMs and the cement portion of any such cement containing SCMs — is the most appropriate benchmark.

The exclusion of SCMs from the CSCME proposed cement industry benchmark is consistent with the proposed EU-ETS benchmark mentioned in CARB's May 17th presentation. As discussed in EU-ETS documents, it is impossible to achieve an unbiased standard for the cement industry unless SCMs are excluded from the standard. The benchmark proposed by CSCME adheres to the rationale behind the proposed EU-ETS standard, but is expanded slightly beyond clinker to include other key components of ASTM cement, including gypsum and limestone.

This benchmark proposed by CSCME has several beneficial properties:

- (1) *Actionable:* The scope of the proposed benchmark includes those decisions that are directly within the cement manufacturer's control — namely, the production of clinker and the use of mineral additives.
- (2) *Unbiased:* Like clinker, ASTM cement is a consistent, uniform, and unbiased standard. Furthermore, to the extent that regional or national data are used to establish the benchmark, the exclusion of SCMs from the output metric is necessary to avoid severely and unfairly penalizing California cement manufacturers. Key SCMs (e.g., fly ash and granulated blast furnace slag) are primarily produced east of the Mississippi River, and due to transportation costs and other logistical factors,

economic access to these supplies tends to be highly localized. The use of a benchmark that excludes SCMs eliminates such regional biases.

- (3) *Equitable*: ASTM cement is consistent with the vast majority of output from a cement manufacturing plant. For a variety of reasons, including economics and market structure, SCMs are typically blended with cement at concrete batch facilities and are not commonly blended directly at a cement manufacturing facility.¹⁰ Rather, they are primarily blended with cement at concrete batch plants, and furthermore, such blending is highly dependent on the unique characteristics of the local market (*i.e.*, high market variability could favor one manufacturer over another that does not operate under similar market conditions). Consequently, this definition avoids unnecessary competitive distortions among California cement producers and concrete batch plants.

- *The "cap adjustment factor" should reflect differences in leakage exposure across industries*

The uniform "cap adjustment factor" included in CARB's proposed distribution formula effectively dictates that allowances to all industries will decrease in concert with the cap. The use of a uniform cap adjustment factor implicitly assumes that the ability to reduce GHG emissions is equal across sectors and conceptually contradicts CARB's "tiered approach" to allocating allowance value, which recognizes that policy assistance should be differentiated based on exposure to leakage risks.

In reality, the ability to reduce emissions varies by sector and, if the cap adjustment factor is not adjusted based on availability of GHG reductions, it will severely disadvantage sectors that have few GHG reduction measures available. As a result, those industries that are highly leakage-prone and have relatively few cost-effective abatement opportunities will not receive an amount of allowances sufficient to fully offset their realized compliance costs due to the policy — thereby exacerbating leakage.

A more valid approach would be to vary the cap adjustment factor across industries. Specifically, the cap adjustment factor for those industries with relatively more cost-effective abatement opportunities and a low risk of leakage should decline at a rate that is greater than the cap's decline, while the factor for those industries with relatively fewer cost-effective abatement options and a high risk of leakage should be held constant at 1.0 for all compliance periods.

III. Treatment of Imports

3.1 A benchmarking approach alone will not minimize the risk of leakage in the cement industry

Although free allowances can provide relief to industries facing increased compliance costs under an emissions reduction program, an output-based benchmarking approach is insufficient alone to minimize leakage in highly vulnerable industries.

To illustrate this concern, consider a scenario in which allowances are allocated up to an industry average GHG intensity and offset 100 percent of the cement industry's compliance costs throughout the

¹⁰ For a detailed discussion of issues associated with increasing SCM blending in California, see: Wescott, Robert et al. "Prospects for Expanding the Use of Supplementary Cementitious Materials in California".

entire policy timeframe. Given that the allocation of allowances is based on an industry average GHG intensity, rather than the intensity of individual manufacturers, those California producers with above-average GHG intensities will incur a net cost and those producers with below-average GHG intensities will receive a net benefit.

In theory, those California producers with below-average GHG intensities will increase their production and acquire additional market share from those with above-average GHG intensities — resulting in no leakage impacts. In reality, however, capacity limitations in the California cement industry will prevent more carbon-efficient entities from simply increasing production in the short and medium term. Rather, those California producers with above-average GHG intensities are likely to lose market share to foreign competitors.

Given this divergence between theory and reality, even an output-based benchmarking approach that offsets 100 percent of the cement industry's compliance costs (but not 100 percent of each individual entity's compliance costs) will fail to minimize leakage. Furthermore, to the extent that allowance value distributed under an output-based benchmarking approach is less than 100 percent of the industry's compliance costs (*i.e.*, an assistance factor or cap adjustment factor that is less than 1.0) or is phased out prior to the elimination of leakage risk (*i.e.*, prior to comparable carbon constraints being applied to competitors in other jurisdictions), the risk of leakage will increase.

3.2 A partial border adjustment is necessary to level the playing field in the cement industry

Given these concerns, CSCME believes that the best approach for minimizing leakage associated with cement consumed in California is a combination of output-based free allowances up to an industry average and a partial border adjustment on imports with a GHG intensity that exceeds the average. The free allowance program minimizes inter-industry leakage (*i.e.*, reductions in market share in the downstream market for concrete, which tends to have a lower carbon footprint than alternative construction materials) by offsetting compliance costs up to a given level, while the partial border adjustment minimizes intra-industry leakage (*i.e.*, reductions in market share to imported cement) by maintaining compliance cost parity between cement produced in California and imported cement with GHG intensity exceeding the California industry's average GHG intensity.

3.3 The cement industry is uniquely suited to a border adjustment mechanism

CSCME recognizes that a border adjustment may not be appropriate for all imports, particularly because of the administrative burden of such a comprehensive economy-wide measure. However, for certain industries that are at a significant risk of leakage and for which a border measure would not create unreasonable administrative burdens, the implementation of a border adjustment is necessary to uphold CARB's statutory mandate to minimize leakage and is critical to achieving AB 32's climate change objectives. As discussed above and in our extensive prior comments, the California cement industry is at a significant risk of leakage, and the structure of the industry makes it particularly amenable to the use of a border adjustment with limited administrative burdens.

Imports of cement enter California through only limited pathways, with the vast majority entering through a small number of specially-designed import terminals at California ports. Moreover, virtually all cement is used to manufacture concrete, which is extremely impractical to import from out of state. By contrast, other industries may produce a wide range of highly differentiated downstream products (e.g., the steel industry may produce slabs, rebar, tube, and flat products, which are also used in appliances and automobiles). In addition, the raw material for these products (e.g., steel) could be shipped to an unregulated jurisdiction, where it could be further manufactured into a downstream product (such as an automobile) that might be difficult or impossible to cover with a border adjustment. For the cement industry, however, such potential circumvention would not occur because of the lack of imports of downstream products, and therefore, it is not necessary to apply a border adjustment to further manufactured goods in the cement industry. Accordingly, a partial border adjustment applied to imported cement that exceeds the California industry's average GHG intensity (or, more generally, the level of assistance provided to California producers) would be an effective and efficient tool against leakage in the California cement industry.

3.4 A partial border adjustment is WTO consistent and constitutional

A measure to ensure that imports face similar cost burdens associated with their carbon footprint can be designed and implemented in a manner that is consistent with the U.S. Constitution and with obligations under the WTO Agreements.

In general, a border adjustment could be designed to ensure that imported products face the same regulatory requirements as products produced in California, with any differences based solely on the carbon footprint of the product, not on where the product is produced. The objective of any border adjustment would be to minimize leakage and thus ensure that California can achieve its environmental objectives, a traditional area of state interest. Even if found to be discriminatory under applicable WTO provisions, a properly designed border adjustment would qualify for an "exception" under the WTO rules for measures related to the conservation of exhaustible natural resources (*i.e.*, the earth's atmosphere).

CSCME has conducted in-depth constitutional and WTO analysis of various options for implementing effective border measures that would maximize the likelihood of surviving constitutional and WTO scrutiny. For the California cement industry, a partial border adjustment is critical to preserving California cement capacity and ensuring that California cement consumption does not shift to higher GHG-intensive imported cement. CSCME looks forward to further discussions on the appropriate design for a constitutional and WTO consistent border adjustment that would work together with allocations to minimize leakage in the California cement industry and achieve the climate change objectives of AB 32.

IV. Conclusion

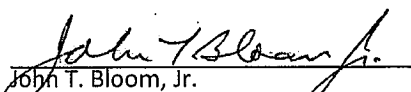
CSCME commends CARB's efforts to design a policy framework that recognizes the risk of leakage and addresses it through the provision of allowance value to affected entities. In particular, we support

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CARB's development of a "tiered approach" recognizing that the minimization of leakage is a policy priority and allocating allowance value accordingly. We also commend CARB's approach to differentiating assistance across industries based on the severity of leakage risks. In our view, both of these concepts represent significant and necessary innovations in the area of climate policy design.

We have several serious concerns, however, regarding the application of those concepts. These include: the use of emissions data and shipments data from different years in the determination of an industry's GHG intensity, the use of producer price indices in the determination of an industry's trade exposure, the mechanism used to offset increased electricity prices, the definition of output in a cement industry benchmark, the adoption of a uniform cap adjustment factor across all sectors, and the absence of a partial border adjustment mechanism. CSCME intends to comment further on these and other concerns, including the approach used to calculate trade intensities, upon release of CARB's white paper containing applicable methodologies.

Sincerely yours,



John T. Bloom, Jr.
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